

## **15. INSECT-BORN DISEASES & INSECT BITES/STINGS**

Lesson Topic: Prevention of Insect Borne Disease

Instructional References:

1. FM 21-11
2. NAVMED P-5004

Terminal Objectives:

1. To instruct the marine in first aid procedures for insect bites and stings.
2. To instruct the marine to identify which diseases of military importance are spread by insects.

Enabling Objectives: Upon completion of this lesson the students will be able to :

1. Perform first aid procedures in the case of insect bite or sting.
2. Identify signs and symptoms of insect bites and stings.
3. Identify various insect borne diseases and the insects that transmits it.

### **I. BITES AND STINGS**

A. An insect bite or sting can cause great pain, disease and inflammation. If not treated correctly , some bites/stings may cause serious illness or even death.

B. The insects found throughout the world that can produce a bite or sting are too numerous to mention.

### **II. SYMPTOMS**

- A. Severe swelling
- B. Severe bleeding within tissues, cavities and body organs.
- C. Nervous system disturbance
- D. Shock
- E. Hives

### **III. TREATMENT**

- A. There are certain principles that apply regardless of what caused the bite or sting.
1. Wash area of bite/sting with soap and water. If only water is available, rinse off, but do not scrub.
  2. Avoid scratching, rubbing or in any way irritating the area. In the process of rubbing or scratching, you may spread the toxin or introduce infection.
  3. Watch for signs of allergic reaction and be prepared to perform CPR and treat for shock.
  4. Attempt to capture the insect for positive identification, being careful not to become a victim of it.
  5. Keep the victim calm and reassured .
  6. Since many of these injuries cause swelling, remove jewelry before the area swells. Ice, if available, may be used to reduce swelling, ease the pain, and slow the absorption of the venom.
  7. In extreme cases, transport the victim to nearest medical facility.

### **IV. INSECT BORNE DISEASES**

- A. Insects are capable of transmitting numerous disease-producing organisms on their feet, and in their vomit and feces.
- B. Insects breed in swamps, waste disposal sites, rubbish, feces, still water and on the bodies of animal or human hosts or their clothing or bedding.

### **V. SPECIFIC INSECTS AND DISEASES THEY CAN TRANSMIT**

- A. House fly - dysentery, diarrhea, cholera and typhoid fever.
- B. Tsetse fly - African Sleeping Sickness.
- C. Mosquito - malaria, yellow fever, dengue fever, filariasis and encephalomyelitis.
- D. Lice - typhus fever, relapsing fever.
- E. Fleas - bubonic plague, typhus.
- F. Cockroaches - diarrhea, dysentery.

G. Ticks - rocky mountain spotted fever, relapsing fever, tularemia and lyme disease

NOTE: Anopheles mosquito transmits malaria, *Aedes aegypti* mosquito transmits yellow fever.

## **VI. PREVENTION OF INSECT BORNE DISEASES**

A. Keep immunizations current.

B. Maintain good personal hygiene.

C. Practice good sanitation in the field such as:

1. Bury or burn garbage.

2. Use proper latrines.

3. Drain standing water.

D. Take personal protective measures

1. Roll down sleeves, button collars.

2. Use insect repellents.

3. Use head nets, bed nets.

4. Take malaria tablets when required so.

5. Avoid animals that could carry ticks or fleas.

6. Search for and remove ticks from your body after being in grass and brush.

## **VII. REVIEW**

A. Instructor should review high lights of first aid procedures for bites and stings. Review diseases carried by insects.

B. Instructor should ask students if they have any questions. Questions should also be allowed during the lecture to clarify any misunderstanding.

C. If students do not have any questions, instructor should ask questions to insure that the lesson is understood.